The invention is claimed as follows:

1. A punch for cutting a hole in a workpiece, said punch comprising:

a punch body having an axial bore therethrough for alignment with an aperture in the workpiece;

means for cutting the workpiece, said cutting means extending from said punch body a predetermined distance; and

means extending from said punch body a predetermined distance for centering said punch body with the aperture of the workpiece, said centering means extending from said punch body a greater distance than said cutting means such that said centering means enters the aperture of the workpiece prior to said cutting means cutting the workpiece.

2. A punch as defined in claim 1, wherein said centering means comprises a member positioned within said axial bore of said punch body.

3. A punch as defined in claim 2, wherein said member is an insert which is attached to said punch body.

4. A punch as defined in claim 3, wherein said insert is cylindrical.

5. A punch as defined in claim 3, wherein said insert has first and second ends, said first end of said insert being fastened into said axial bore of said punch body, said second end of said insert having a chamfered edge, said second end extending further away from said punch body than said cutting means.

6. A punch as defined in claim 5, wherein said edge is chamfered between approximately a 30 degree angle and a 45 degree angle.

7. A punch as defined in claim 5, wherein said second end of said insert extends approximately 1/16 inch further away from said punch body than said cutting means.

8. A punch as defined in claim 3, wherein said punch body has an axial counterbore in communication with said axial bore, said insert being fastened into said axial counterbore of said punch body.

9. A punch as defined in claim 1, wherein said centering means comprises first and second projections positioned opposite of each other and adjacent to said axial bore of said punch body.

10. A punch as defined in claim 9, wherein each said projection tapers downwardly from a top surface thereof toward an outer edge of said punch body.

11. A punch as defined in claim 10, wherein each said projection tapers downwardly to said cutting means.

12. A punch as defined in claim 10, wherein said projections extend approximately 1/16 inch further away from said punch body than said cutting means.

13. A punch as defined in claim 1, wherein said cutting means comprises first and second piercing portions extending from said punch body for piercing the workpiece and first and second cutting portions extending from said punch body for shearing the workpiece.

14. A punch as defined in claim 13, wherein said first piercing portion has first and second surfaces which meet to form a point, said first surface of said first piercing portion slopes downwardly from said point of said first piercing portion toward said axial bore of said punch body and said first cutting portion, said second surface of said first piercing portion extends axially downwardly to said second cutting portion, and wherein said second piercing portion has first and second surfaces which meet to form a point, said first surface of said second piercing portion slopes downwardly from said point of said second piercing portion toward said axial bore of said punch body and said second cutting portion, said second surface of said second piercing portion extends axially downwardly to said first cutting portion.

15. A punch as defined in claim 14, wherein said first cutting portion slopes downwardly from said first surface of said first piercing portion to said second surface of said second piercing portion, and wherein said second cutting portion slopes downwardly from said first surface of said second piercing portion to said second surface of said first piercing portion, such that said first and second cutting portions slope downwardly in opposite directions.

16. A punch as defined in claim 15, wherein said first and second cutting portions have outer peripheral edges which form cutting edges on opposite sides of said punch body.

17. A punch as defined in claim 13, wherein said centering means extends 1/16 inch further away from said punch body than said piercing portions.

18. A punch for cutting a hole in a workpiece, said punch comprising:

a punch body having an axial bore therethrough for alignment with an aperture in the workpiece;

a pair of piercing portions extending from said punch body a predetermined distance for piercing the workpiece;

a pair of cutting portions extending from said punch body a predetermined distance for shearing the workpiece after said pair of piercing portions has pierced the workpiece; and

a member positioned within said axial bore of said punch body for centering said punch body with the aperture of the workpiece, said member extending further away from said punch body than said pair of piercing portions such that said member engages the aperture of the workpiece prior to said pair of piercing portions piercing the workpiece.

19. A punch as defined in claim 18, wherein said member is an insert which is attached to said punch body.

20. A punch as defined in claim 19, wherein said insert is cylindrical.

21. A punch as defined in claim 19, wherein said insert has first and second ends, said first end of said insert being fastened into said axial bore of said punch body, said second end of said insert having a chamfered edge, said second end extending further away from said punch body than said pair of piercing portions.

22. A punch as defined in claim 21, wherein said edge is chamfered between approximately a 30 degree angle and a 45 degree angle.

23. A punch as defined in claim 21, wherein said second end of said insert extends approximately 1/16 inch further away from said punch body than said pair of piercing portions.

24. A punch as defined in claim 21, wherein said punch body has an axial counterbore in communication with said axial bore, said first end of said insert being fastened into said axial counterbore of said punch body.

25. A punch as defined in claim 18, wherein said pair of piercing portions are positioned opposite each other along an edge of said punch body.

26. A punch as defined in claim 25, wherein said pair of cutting portions are positioned opposite each other and extend generally from one of said piercing portions to said other of said piercing portions, said cutting portions have cutting edges along said edge of said punch body and extend from said edge of said punch body to said axial bore of said punch body.

27. A punch for cutting a hole in a workpiece, said punch comprising:

a punch body having an axial bore therethrough for alignment with an aperture in the workpiece;

first and second piercing portions extending from said punch body a predetermined distance for piercing the workpiece;

first and second cutting portions extending from said punch body a predetermined distance for shearing the workpiece after said first and second piercing portions have pierced the workpiece; and

first and second projections extending from said punch body a predetermined distance and positioned opposite of each other and adjacent to said axial bore of said punch body, said first and second projections capable of centering said punch body with the aperture of the workpiece, said first and second projections extending further away from said punch body than said first and second piercing portions such that said first and second projections engage the aperture of the workpiece prior to said first and second piercing portions piercing the workpiece.

28. A punch as defined in claim 27, wherein said first piercing portion has first and second surfaces which meet to form a point, said first surface of said first piercing portion slopes downwardly from said point of said first piercing portion toward said first projection and said first cutting portion, said second surface of said first piercing portion extends axially downwardly to said second cutting portion, and wherein said second piercing portion has first and second surfaces which meet to form a point, said first surface of said second piercing portion slopes downwardly from said point of said second piercing portion toward said second projection and said second cutting portion, said second surface of said second piercing portion extends axially downwardly to said first cutting portion.

29. A punch as defined in claim 28, wherein said first cutting portion slopes downwardly from said first surface of said first piercing portion to said second surface of said second piercing portion, and wherein said second cutting portion slopes downwardly from said first surface of said second piercing portion to said second surface of said first piercing portion, such that said first and second cutting portions slope downwardly in opposite directions.

30. A punch as defined in claim 29, wherein said first and second cutting portions have outer peripheral edges which form cutting edges on opposite sides of said punch body.

31. A punch as defined in claim 28, wherein said first projection tapers downwardly to said first surface of said first piercing portion, and wherein said second projection tapers downwardly to said first surface of said second piercing portion.